UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,695	06/28/2001	Liew Chuang Chiu	3918P017	9069

8791 7590 06/18/2004

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER	
LIN, TINA M	

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/896,695	CHIU ET AL.	
	Examiner	Art Unit	
	Tina M Lin	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26 and 40-69* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10,23,26,50-62,65 and 66* is/are allowed.

6)☒ Claim(s) *1-7,9,11-22,24,25 and 40-49* is/are rejected.

7)☒ Claim(s) *8,63,64 and 67-69* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/18/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is responsive to applicant's communication submitted on 18 May 2004. Correction of the minor informalities are noted by the Examiner.

Applicant's arguments, filed 18 May 2004, with respect to claims 1-26 and 40-62 have been fully considered and are persuasive. Applicant amends the independent claims to incorporate and further clarify a push-actuator being pushed inward into the fiber optic module. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent 6,556,445 to Medina.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-7, 9, 11, 12, 40- 45 and 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,556,445 to Medina. In regards to claims 1, 3-7, 9, 11 and 12, Medina discloses a fiber optic module (10) with a push actuator (38) movably coupled to the fiber optic module to move inward into the module which releases the fiber optic module from a cage assembly (12/14) in response to the push actuator being pushed. Medina also discloses the push actuator to include one or more grooves, the push actuator to slide inwardly to release the module from the cage assembly and for the push actuator to have one or more ramps (52) to release the fiber optic module from the cage assembly. But Medina fails to specifically disclose one or more electro-optic transducers within the fiber optical module to convert optical signals

into electrical ones or electrical signals into optical ones. However, Medina does disclose that the fiber optic module is an optoelectric transceiver module. Optoelectrical transceiver modules are modules which have the ability to convert electrical signals into optical ones and vice versa, hence the preceding adjective, "optoelectrical". Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used one or more electro-optic transducers in the fiber optic module. Additionally, from Figure 1, it can be observed that the push actuator is a push button. Furthermore, on Page 26 in Applicant's specification, Applicant discloses that a kick actuator is also referred to as a push button. Therefore, since Medina discloses a push button in Figure 1 and Applicant states that a kick actuator is also referred to as a push button, Medina discloses in Figure 1 a kick-actuator as well. Furthermore, Medina fails to disclose a nose having a nose grip to pull out the fiber optic module. However, having a nose with a grip on the fiber module, a pull grip having dimples or a handle are all components to aid in the more careful removal of the fiber optic module. Especially when handling PCB boards and other sensitive electronic devices, it would be obvious at the time the invention was made to a person having ordinary skill in the art to have included the features, a nose with a grip or a pull grip with a handle or dimples, for the aid in careful removal of sensitive components.

In regards to claims 40-45, Medina discloses a fiber optic module with a means for slidably engaging a means for withdrawing the fiber optic module from a cage. Furthermore, in Figure 1, the push button to disengage the module from a cage assembly further lifts a latch, which causes the disengagement of the two components. But, Medina fails to specifically disclose a means for converting optical signals into electrical ones or electrical signals into

optical ones. However, Medina does disclose that the fiber optic module is an optoelectric transceiver module. Optoelectrical transceiver modules are modules which have the ability to convert electrical signals into optical ones and vice versa, hence the preceding adjective, "optoelectrical". Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have a means for converting optical signals into electrical ones and vice versa.

In regards to claims 48 and 49, Medina discloses a method of engaging a fiber optic module with a push button into a cage assembly by pushing. But Medina fails to disclose the step of determining if the module is fully inserted into the cage assembly by checking whether the push button is fully extended out and pushing the module further into the cage if it is not. However, from Figure 1, it can be observed that when the fiber optic module is fully pushed into the cage assembly, the push button is then released back to the original starting position. Therefore, if the module is not fully in the cage assembly, the push button would not be fully extended outward. Although Medina does not specifically state the push button to fully extend outward if the module is completely inserted in to the cage assembly and pushing the module further into the cage if it is not, it can be observed from Figure 1 and the structure of the assembly that the push button would indeed be fully extended out if the module is properly inserted into the cage assembly. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have checked if the push button was fully extended and if not, to push the module further into the cage assembly.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,556,445 to Medina as applied to claim 1 above, and further in view of U.S. Patent 6,364,709

B1 to Jones. Medina discloses all discussed above but fails to disclose the optical fiber module to be a SFP cage assembly. However, Jones discloses a SFP cage assembly to be connected to an optical module with the ability to convert optical signals to electrical signals, electrical signals to optical signals and with the ability to disengage the optical module. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art for the optical module to be withdrawn from a cage assembly and to use a SFP cage assembly.

Claims 13-22, 24-25 and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,556,445 to Medina in view of U.S. Patent 6,364,709 B1 to Jones. In regards to claims 13-22, Medina discloses a fiber optic module with a push actuator movably coupled to the fiber optic module to move inward into the module which releases the fiber optic module from a cage assembly in response to the push actuator being pushed. Medina also discloses the push actuator to include one or more grooves, the push actuator to slide inwardly to release the module from the cage assembly and for the push actuator to have one or more ramps (52) to release the fiber optic module from the cage assembly. But Medina fails to specifically disclose one or more electro-optic transducers within the fiber optical module to convert optical signals into electrical ones or electrical signals into optical ones. However, Medina does disclose that the fiber optic module is an optoelectric transceiver module. Optoelectrical transceiver modules are modules which have the ability to convert electrical signals into optical ones and vice versa, hence the preceding adjective, "optoelectrical". Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used one or more electro-optic transducers in the fiber optic module. Furthermore, Medina fails to disclose a rigid pull tab coupled to the module to withdraw the module from the cage assembly, where the pull

tab further shields EM radiation. However, in order to protect the critical components within the optical module and the cage assembly, it would be logical to avoid contact with the components, and therefore a pull tab to withdraw the fiber optic module would have been obvious to one skilled in the art. Furthermore, although Jones does not disclose a rigid pull tab as well, Jones does disclose the cage assembly to further function as an EM shield for protection. (Column 1) Therefore, it would have been obvious at the time the invention was made to a person with ordinary skill in the art to have had a pull tab with a shield to contain EM radiation for protection. Furthermore, Medina and Jones both fail to specifically disclose where the pull tab and push actuator is located. However, since Applicant discloses more than one possible location for the push actuator and the pull-tab to be located, it is a non-critical feature of the invention. Additionally, the top and bottom of a fiber optic module is a relative term that can be defined in numerous ways depending on the orientation of the device. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have placed the pull tab and push actuator in a desirable location. Additionally, Medina and Jones both fail to disclose the rigid pull tab to be made of a solid material, a metal, a plastic or a conductive material. However, Applicant discloses a wide range of materials that can be used for the making of the rigid pull tab. Since any of the materials disclosed above by Applicant can be used to construct the pull tab, it is a non-critical feature of the invention. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used an appropriate material for the rigid pull tab.

In regards to claims 46 and 47, Medina discloses pushing a push button (38) of a fiber optic module (10) to release a latch (32). But Medina fails to disclose a pull tab coupled to the

module to withdraw the module from the cage assembly. However, in order to protect the critical components within the optical module and the cage assembly, it would be logical to avoid contact with the components, and therefore a pull tab to withdraw the fiber optic module would have been obvious to one skilled in the art. Furthermore, although Jones does not disclose a rigid pull tab as well, Jones does disclose the cage assembly to further function as an EM shield for protection. (Column 1) Therefore, it would have been obvious at the time the invention was made to a person with ordinary skill in the art to have had a pull tab with a shield to contain EM radiation for protection.

Allowable Subject Matter

Claims 8, 63, 64, and 67-69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record in this application fails to disclose or reasonably suggest a second actuator in a fiber optic module cage assembly where the second actuator has a first end with one or more ramps and a push actuator coupled to the second end that causes the second actuator to release the fiber optic module from the cage assembly. The prior art of record also fails to disclose a base portion of the fiber module to have one or more electro-optic transducers and a push actuator coupled to the base portion to move inward into the module. The prior art of record also fails to disclose further a fiber module with a cage assembly with the additional features having a push actuator coupled to the case portion of a nose, where the nose has one of more optical receptacles aligned with one or more electro-optic transducers.

Claims 10, 23, 26, 50-62 and 65-66 are allowed for the reasons stated in the pervious office action, mailed 14 January 2004 and paper number 012004.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The documents submitted by applicant in the Information Disclosure Statement have been considered and made of record. Note attached copy of form PTO-1449. None of the documents submitted by Applicant discloses or reasonably suggests the allowable subject matter discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M Lin whose telephone number is (571) 272-2352. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TML

John D. Lee
Primary Examiner